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Fire Officials Remind Public Smoke Alarms Save Lives

State Fire Marshal Stephen D. Coan and Fire Chief Kenneth Willette, President of the Fire Chiefs' Association of Massachusetts today reminded the public that smoke alarms save lives. Coan said, "Smoke alarms of all types are effective early warning devices and since we started installing them in people's homes in the 1970's, fire deaths have dramatically decreased."

According to the Massachusetts Fire Incident Reporting System, in 1976, 118 people lost their lives in fires in Massachusetts, in 1986 that number dropped to 93 people; in 1996, 80 people died in fires in the Commonwealth, and last year, 2006, only 44 people died in fires in our state.

Chief Willette said, "Smoke alarms give early warning of a fires which has led to keeping more fires smaller and have reduced the number of multiple death fires as occupants get the early warning to escape." Smoke alarms often cannot save people who are intimately involved in the ignition of the fire, but they can save other residents by alerting them to the danger.

Coan added, "In too many fatal fires, we find no smoke alarms at all, or the smoke alarm had no battery or had been disconnected. Making sure we have working smoke alarms is our first line of defense against fire."

Two Types of Smoke Alarms
There are two main technologies used in home smoke alarms: ionization and photoelectric. Ionization smoke alarms work by detecting ionized particles in smoke. Flaming fires tend to produce more ions and so these alarms are slightly more responsive to flaming fires. Photoelectric smoke alarms work when particles come across a beam of light. Smoldering fires tend to produce larger particles and so photoelectric smoke alarms tend to be slightly more reactive to smoldering fires.

Recent NIST Study on Smoke Alarms Recommends Both Types
The recent National Institute for Standards and Technology (NIST) study on smoke alarms concluded that since one cannot anticipate which kind of fire you will have, that while both types provide effective early warning, the best protection is to have both kinds.

Recent Smoke Characterization Study
Fire officials believe that the science and technology of smoke detection is constantly evolving and improving. The Fire Protection Research Foundation (FPRF) and Underwriters Laboratories (UL) recently completed a research project on the characteristics of smoke and how materials used in modern residential settings have changed the way fires behave in homes. The recent *Smoke Characterization Study* (www.ul.com/newsroom/newsrel/nr042407.html) was a major step toward increasing our knowledge and understanding of smoke from products burning in the modern day home. It will assist national scientific experts as they continue to study and evaluate smoke, smoke detection and residential sprinkler technologies to enhance life safety.

Concern Over Age of Smoke Alarms
Coan said, “Smoke alarms should be replaced every ten years. Like all appliances, they don’t last forever.” Studies have indicated that the life expectancy of a smoke alarm is 10 years and that after that the ability to rely on them diminishes. The Board of Fire Prevention Regulations is considering regulations that require replacement every ten years.

Home Fire Drills: Know What to Do with Early Warning
Willette added, “Working smoke alarms are just the first step towards protecting your family from fire. Having an escape plan and actually practicing it by holding home fire drills will help family members know what to do when the alarm sounds.”

For more information on smoke alarms contact your local fire department, the National Fire Protection Association (www.nfpa.org), the National Association of State Fire Marshals (www.firemarshals.org), or the state Department of Fire Services.

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